

One step for medication safety



Potassium chloride infusion

Review of prescriptions (concentration and fluid)

Check the potassium chloride infusion prescriptions (concentration and fluid). Resident medical officers are encouraged to undertake this one step.

Patients are prescribed intravenous fluids containing potassium for a variety of indications. There is also a requirement for different potassium concentrations in various different fluids. Many are available as pre-mixed commercially manufactured infusions.

Reviewing the information from the concentrated potassium ampoules first step:

Lucian Leape (co-author of 'To err is human: Building a safer health system') said: 'The way to prevent tragic deaths from accidental intravenous injection of concentrated potassium chloride is excruciatingly simple – organizations must take it off the floor stock of all units. It is one of the best examples I know of a "forcing function" – a procedure that makes a certain type of error impossible.'

Having identified concentrated potassium chloride ampoules are stocked in your ward or hospital, this one step may identify whether pre-mixed potassium infusions could be used for all potassium infusion prescriptions. It may identify that a prescriber is regularly prescribing concentrations or diluents that require concentrated potassium chloride ampoules remaining on ward stock and allow teams to address why this practice is required. This may then allow for a review and change of practice which would remove the need for concentrated potassium chloride ampoules storage on the ward.

This one step needs to be done in real time, ie, when the prescriptions are current and the bags are hanging. Retrospectively, it may be impossible to tell if a pre-mixed infusion or an infusion prepared using ampoules and an intravenous fluid bag was used.

The activity:

To review potassium chloride infusion prescribing, please check 10 potassium chloride infusion prescriptions.

To do this the Health Quality and Safety Commission's Medication Safety team has put together a simple data collection tool to assess concentrated potassium chloride infusion use at either a ward/unit or DHB level.

Hospital	Ward/Unit										
Review of prescribing	Prescription										
For the last 10 potassium chloride infusion prescriptions	eg	1	2	3	4	5	6	7	8	9	10
What was the concentration of potassium chloride prescribed (mmol/mL)?	20/500										
What was the infusion fluid prescribed?	Dextrose 5%										
Was a pre-mixed infusion bag available on the ward that matched the prescription?	Y										
Was this pre-mixed infusion bag used?	N										
Is the pre-mixed infusion bag that matched the prescription registered and funded in New Zealand?	N/A										

Review your results

- Review your results with your team and, if necessary the multidisciplinary team.
- What do the results show?

Next steps

- Review what you and your team can do to increase the use of pre-mixed potassium chloride infusions and reduce the requirement for the use of concentrated potassium chloride ampoules on the ward.

With thanks to the Patient Safety First Campaign for permission to use the one step approach